

What is claimed is:

1. A vehicle air-conditioning system comprising:

a heat exchanger for cooling air blown into a passenger compartment;

a face opening through which the air having passed the heat exchanger for cooling is blown to an upper body region of a passenger in the passenger compartment;

a foot opening through which the air having passed the heat exchanger for cooling is blown to a foot region of the passenger in the passenger compartment;

temperature detecting means for detecting a temperature having a correlation with a temperature of the air blown from the heat exchanger for cooling; and

calculation means for calculating a target air temperature of the air blown into the passenger compartment,

wherein the air-conditioning system provides at least a face mode in which the air is blown from the face opening to the upper body region of the passenger in the passenger compartment, and a bi-level mode in which the air is blown from the face opening and the foot opening to both the upper body region and the foot region of the passenger in the passenger compartment, and

wherein the system is configured such that the face mode is selected when the target air temperature is between a first predetermined temperature and a second predetermined temperature, which is higher than the first predetermined temperature,

the bi-level mode is selected when the target air temperature is higher than the second predetermined temperature,

the bi-level mode is selected when the target air temperature is lower than the first predetermined temperature and the temperature detected by the temperature detecting means is higher than a predetermined temperature, and

the face mode is selected when the target air temperature is lower than the first predetermined temperature and the temperature detected by the temperature detecting means is lower than the predetermined temperature.

2. A vehicle air-conditioning system comprising:

a heat exchanger for cooling air blown into a passenger compartment;

a face opening through which the air having passed the heat exchanger for cooling is blown to an upper body region of a passenger in the passenger compartment;

a foot opening through which the air having passed the heat exchanger for cooling is blown to a foot region of the passenger in the passenger compartment; and

calculation means for calculating a target air temperature for the air blown into the passenger compartment,

wherein the system is configured such that the air-conditioning system provides at least a face mode in which the air is blown from the face opening to the upper body region of the passenger in the passenger compartment, and a bi-level mode

in which the air is blown from the face opening and the foot opening to both the upper body region and the foot region of the passenger in the passenger compartment, and

wherein the face mode is selected when the target air temperature is between a first predetermined temperature and a second predetermined temperature, which is higher than the first predetermined temperature,

the bi-level mode is selected when the target air temperature is higher than the second predetermined temperature,

the bi-level mode is selected when the target air temperature is lower than the first predetermined temperature and the cooling load is high, and

the face mode is selected when the target air temperature is lower than the first predetermined temperature and the cooling load is low.

3. The vehicle air-conditioning system according to claim 2, wherein a degree of the cooling load can be evaluated on the basis of a temperature having a correlation with a temperature of the air blown from the heat exchanger for cooling.

4. The vehicle air-conditioning system according to claim 1, further comprising:

a heat exchanger for heating the air having passed the heat exchanger for cooling on a downstream side of the heat

exchanger for cooling,

wherein the system is configured such that a foot mode can be set in which the air having passed the heat exchanger for heat is blown into the foot region of the passenger from the foot opening, and

wherein when the target air temperature is higher than a third predetermined temperature, which is higher than the second predetermined temperature, the bi-level mode is changed to the foot mode.

5. The vehicle air-conditioning system according to claim 2, further comprising:

a heat exchanger for heating the air having passed the heat exchanger for cooling on a downstream side of the heat exchanger for cooling,

wherein the system is configured such that a foot mode can be set in which the air having passed the heat exchanger for heat is blown into the foot region of the passenger from the foot opening, and

wherein when the target air temperature is higher than a third predetermined temperature, which is higher than the second predetermined temperature, the bi-level mode is changed to the foot mode.

6. The vehicle air-conditioning system according to claim 3, further comprising:

a heat exchanger for heating the air having passed the

heat exchanger for cooling on a downstream side of the heat exchanger for cooling,

wherein the system is configured such that a foot mode can be set in which the air having passed the heat exchanger for heat is blown into the foot region of the passenger from the foot opening, and

wherein when the target air temperature is higher than a third predetermined temperature, which is higher than the second predetermined temperature, the bi-level mode is changed to the foot mode.